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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,903	12/20/2000	Sang-Soo Lee	11349-P66227US0	4948

7590 02/11/2004

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EXAMINER

LI, SHI K

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/739,903

Applicant(s)

LEE ET AL.

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 9-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 9 recites the limitation "in an absence of an additional phase modulator" in line 10 of the claim. The limitation is not in the specification as originally filed and considered as new matter.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "in an absence of an additional phase modulator" in line 10 of the claim. The meaning of additional phase modulator is unclear. It is not clear whether it

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means no phase modulator in the apparatus or the number of phase modulators equal to the number of transmitters or some other relationship.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemecek et al. (U.S. Patent 5,953,139) in view of Horiuchi et al. (Y. Horiuchi et al., "Stimulated Brillouin Scattering Suppression Effects Induced by Cross-Phase Modulation in High Power WDM Repeaterless Transmission", Electronics Letters, Vol. 34, No. 4, 19th February 1998).

Nemecek et al. discloses in FIG. 1 an arrangement for suppressing Stimulated Brillouin Scattering (SBS). FIG. 1 comprises a plurality of optical transmitters 12, OSC 30 (equivalent to the supervisory signal) and a transmission means for phase modulating the information signal via phase modulator 16. The phase modulation broadens the spectral width of each channel and suppresses SBS. Regarding claims 1 and 5, the difference between Nemecek et al. and the claimed invention is that Nemecek et al. does not explain "cross phase modulation" effect. Horiuchi et al. explains in page 390, left col., second paragraph that modulating the WDM signal causes cross-phase modulation (XPM) which suppresses SBS. One of ordinary skill in the art would have been motivated to adopt the explanation of Horiuchi et al. to the arrangement of Nemecek et al. because Horiuchi et al. has provided experimental results as evidence. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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understand that the arrangement of Nemecek et al. causes cross-phase modulation effect to broaden the spectral width, as taught by Horiuchi et al., because Horiuchi et al. provides experimental results as evidence.

Regarding claims 2 and 6, Nemecek et al. further includes in FIG. 1 multiplexer 4, demultiplexer 22 and receiver 24. Horiuchi et al. teaches in FIG. 1 that a plurality of amplifiers can be used to restore the signal power level for long distance transmission. Horiuchi et al. further teaches to include a receiver for receiving the signal from the PPG.

Regarding claims 3-4 and 7-8, Nemecek et al. includes in FIG. 1 a circuit for control the level of modulation. Nemecek et al. only modulates the information signal.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki (U.S. Patent 6,414,772 B2) in view of Kinoshita (U.S. Patent 6,023,366).

Miyazaki discloses in FIG. 13 an optical transmission system for suppressing SBS using cross-phase modulation (XPM). FIG. 13 comprises a plurality of transmitters, each having a wavelength separation. The difference between Miyazaki and the claimed invention is that Miyazaki does not teach to use one of the channels as supervisory channel. Kinoshita teaches in FIG. 1 to designate a wavelength channel for supervisory purpose. One of ordinary skill in the art would have been motivated to combine the teaching of Kinoshita with the optical transmission system of Miyazaki because a supervisory channel can carry supervisory information for network management. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to designate a wavelength channel as supervisory channel, as taught by Kinoshita, in the optical transmission system of Miyazaki because a supervisory channel can carry supervisory information for network management.

Regarding claim 10, Miyazaki includes in FIG. 13 optical coupler 2 for multiplexing output signals of the transmitters, a first optical amplifier 5-1 for amplifying the multiplexed signal. Miyazaki further teaches in FIG. 14 a receiver for the transmission system of FIG. 13. FIG. 14 includes a second optical amplifier 22, a demultiplexer 26 and receivers 28-1 to 28-8 for the wavelength channels. The receiver corresponding to the wavelength designated for supervisory receivers the supervisory signal.

Response to Arguments

9. Applicant's arguments filed on 26 November 2003 have been fully considered but they are not persuasive.

10. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., an additional phase modulator is not used) are not recited in the rejected claim(s) 1-8. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 703 305-4341. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

skl


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